**_N_- [((2,3-di-_O_-Acetyl-4,6-dideoxy-4-_N_-((2,2,2-trichloroethoxy)carbonyl)-α-L-talopyranosyl)oxy) ((_R_)-2,2-dimethyl-1,3-dioxolan-4-yl)methyl] 3-_O_-(_tert_-butyldimethylsilyl)-2-_N_-(methoxycarbonyl)-L-threonine amide (11).**

A solution of **10** (1.11 g, 2.64 mmol), and 4 Å powdered molecular sieves (22 g) in dry $CH_2Cl_2$ (39 mL) was stirred at 0 °C for 5 h. Silver triflate (1.99 g, 7.76 mmol) was added in the dark and under an argon atmosphere. The mixture was immediately cooled to -78 °C and a solution of the bromosugar **15** (1.63 g, 3.35 mmol) in dry $CH_2Cl_2$ (20 mL) was dropwise added with stirring under argon atmosphere. The reaction mixture was warmed to 0-5 °C and stirred at that temperature overnight in the dark.

The reaction mixture was diluted with $CH_2Cl_2$ and filtered through Celite. The organic solution (300 mL) was washed successively with two 100-mL portions of aqueous sodium thiosulfate, two 100-mL portions of aqueous sodium bicarbonate and two 100-mL portions of brine, dried, filtered and concentrated to afford a light foam (2.0 g); silica gel TLC (1:1 hexane-ethyl acetate) indicated a mixture of **11** ($R_f$ 0.75) as the major compound, and the 1-OH sugar ($R_f$ 0.70). The mixture was separated by flash column chromatography (20 g silica gel, 2:1 hexane-EtOAc). Compound **11** (870 mg, 1.05 mmol, 40% yield) was isolated as a colorless foam, and most of the sample was used in the next step without any further purification. A small sample was purified further by flash column chromatography (2:1 hexane-EtOAc) to afford pure **11** as a colorless foam: $[\alpha]^{20}_{D}$ -34.3 (_c_ 1.0, $CHCl_3$); silica gel TLC (1:1 hexane-ethyl acetate) $R_f$ 0.75; $^1$H NMR δ 0.13 (3H, s, Si$\mathbf{CH_3}$), 0.17 (3H, s, Si$\mathbf{CH_3}$), 0.92 (9H, s, SiC($\mathbf{CH_3}$)$_3$), 1.05 (3H, d, $J$ = 6.3 Hz, $\mathbf{CH_3}$ threonine), 1.25 (3H, d, $J$ = 6.3 Hz, $\mathbf{CH_3}$ talosugar), 1.35 (3H, s, $\mathbf{CH_3}$ dioxolane), 1.44 (3H, s, $\mathbf{CH_3}$ dioxolane), 1.96 (3H, s, $\mathbf{CH_3}$CO), 2.16 (3H, s, $\mathbf{CH_3}$CO), 3.70 (3H, s, $\mathbf{CH_3}$ MOC), 3.80-4.42 (7H, m, **H-4** and **H-5** talosugar, **H-2** and **H-3** threonine and **H-4, H-5** and **H-5'** dioxolane ring), 4.54 (1H, d, $J = 12.0$ Hz, $Cl_3CCH_2$), 4.95 (1H, d, $J = 12.0$ Hz, $Cl_3CCH_2$), 4.957 (1H, bs, **H-1** talosugar), 5.07 (1H, d, $J = 3.0$ Hz, **H-2** talosugar), 5.20 (1H, t, $J = 3.0$ Hz, **H-3** talosugar), 5.48 (1H, dd, $J = 5.7$ and 9.6 Hz, **HC-O**-talosugar), 5.66 (1H, d, 10.8, TROC-**NH**), 5.70 (1H, d, MOC-**NH**) and 7.35 (1H, d, $J = 9.3$ Hz, **NH**); mass spectrum, *m/z* 826, 824 $(M + H)^+$, 406, 404 and 403; chemical ionization mass spectrum, *m/z* 824.2386 ($C_{31}H_{53}Cl_3N_3O_{14}Si$ $(M + H)^+$ requires *m/z* 824.2365).

***N*-[1-((2,3-di-*O*-Acetyl-4,6-dideoxy-4-*N*-((2,2,2-trichloroethoxy)carbonyl)-α-L-talopyranosyl)oxy)-2(*S*)-((2-methoxyethoxy)methoxy)-2-(4-(4-(methoxycarbonyl)-2-thiazolyl)-2-thiazolyl)ethyl] 3-*O*-((2-methoxyethoxy)methyl)-2-*N*-(methoxycarbonyl)-L-threonine amide (5).**

A solution of crude **23** (60 mg) in 1 mL of dry $CH_2Cl_2$ was treated with 46 μL (44 mg, 0.56 mmol) of dry pyridine and 9.3 μL (13.4 mg, 0.067 mmol) of trifluoroacetic anhydride. After 1 h an additional 4 μL of trifluoroacetic anhydride was added, and the reaction mixture was stirred for an additional 30 min. It was then diluted with $CH_2Cl_2$, washed with $NaHCO_3$ and water, dried, filtered and concentrated to afford a syrup (54 mg) that was purified by flash column chromatography (5 g silica gel, 3:2 hexane-acetone). Compound **5** (47 mg, 0.044 mmol, 76% yield from **21**) was isolated as a syrup. A sample was purified by dissolving it in $Et_2O$ and slowly adding hexane until turbidity developed. After a few minutes, pure **5** separated as a white solid of low melting point: $[\alpha]^{20}_D$ -83.5 (*c* 1.0, $CHCl_3$); silica gel TLC (1:1 hexane-acetone) $R_f$ 0.50; $^1H$ NMR δ 0.91 (3H, d, $J = 6.0$ Hz, $CH_3$ threonine), 1.17 (3H, d, $J = 6.3$ Hz, $CH_3$ talosugar), 1.91 (3H, s, $CH_3CO$), 2.11 (3H, s, $CH_3CO$), 3.35 (3H, s, O-$CH_3$ MEM), 3.37 (3H, s, O-$CH_3$ MEM), 3.40-3.65 (8H, m, O-$CH_2$-$CH_2$-O MEM), 3.69 (3H, s, $CH_3$ MOC), 3.98 (3H, s,

COOC**H**$_3$), 4.20-5.20 (14H, **H-1**, **H-2**, **H-3**, **H-4** and **H-5** talosugar, **H-2** and **H-3** threonine, **H-2** ethyl, O-C**H**$_2$-CCl$_3$, O-C**H**$_2$-O MEM), 5.49 (1H, d, *J* = 10.8 Hz, TROC-N**H**), 6.03 (1H, d, *J* = 8.4 Hz, MOC-N**H**), 6.10 (1H, dd, *J* = 1.8 and 10.2 Hz, **H**C-O-talosugar), 8.12 (1H, d, *J* = 10.2 Hz, N**H**) and 8.2 (2H, 2 singlets superimposed, thiazole-**H**). $^1$H NMR in acetone-$d_6$ showed the two thiazole hydrogens resolved at δ 8.28 and 8.40; mass spectrum, *m/z* 1044 and 1042 (M + H)$^+$; FAB mass spectrum *m/z* 1040.1875 ($C_{37}H_{53}Cl_3N_5O_{19}S_2$ (M + 1)$^+$ requires *m/z* 1040.1844).